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Government of Kerala
കേരള സർക്കാർ
2013



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KL/TV(N)/634/2012-14

KERALA GAZETTE

കേരള ശസ്ത്ര

PUBLISHED BY AUTHORITY

അധികാരികമായി പ്രസിദ്ധീകൃതമായ

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PART III

Stores Purchase

Fire Force Department

RE-TENDER NOTICE

No. F1-11582/2012.

28th December 2012.

Sealed tenders are invited for the purchase of 20 Nos. of Modern Trussed type Aluminium Extension Ladder to Fire and Rescue Services Department. Details of items can be had along with the tender forms. The tenders are reach to the undersigned before 5 p. m. on 14-1-2013.

Estimate Amount— 20,00,000.

EMD—1%.

The tenders should be superscribed as Re-tender No. 37/2012 and addressed to the Commandant General, Home Guards Civil Defence and Fire and Rescue Services Headquarters, Housing Board Junction, Thiruvananthapuram-1. Late tenders will not be accepted. The tenders will be opened at 11 a. m. on 15-1-2013 in the presence of such tenderers or their authorized representatives who may be present at that time.

Intending tenderers may on application to the Commandant General obtain requisite tender form on which tenders should be submitted. Application for tender forms should be accompanied by the cash remittance/money order of 3,000 + 4% VAT (Round to next Rupee) per copy which is the price fixed by Government and is not refundable under any circumstances. The tender forms are not transferable. The sale of tender forms will be closed at 3 p. m. on 12-1-2013. Neither Cheques, Bank Drafts, Postal Order, Postage Stamps etc., will be accepted towards the cost of tender forms, nor will the tender form be sent per Value Payable Post. Duplicate

tender forms if required will be supplied @ 1,500 + 4% VAT per copy. The tenders are to read the general conditions given in the tender forms carefully before the forms are filled up.

Date upto which rates are to be firm—31-3-2013.

Kerala Stamp Paper will be supplied to firms outside State if required by a separate cash remittance of 120 Money Order.

കേരള ഫയർ ആർട്ട് റെസ്ക്യൂ സർവീസ് വകുപ്പിലേക്ക് മോഡേണി ട്രസ്റ്റ് ടെസ്റ്റ് അലുമിനിയം എക്സ്റ്റാൻഷൻ ലാബർ 20 എണ്ണം വിതരണം ചെയ്യുന്നതി ലേക്കായി താൽപ്പര്യമുള്ളവർത്തിൽ നിന്നും മുട്ടേവച്ച ദർശാസുകൾ 37/2012-ാം നമ്പറായി ക്ഷണിച്ചുകൊള്ളുന്നു. മേൽപ്പറ്റി ദർശാസിൽനിന്ന് വിശദവിവരങ്ങൾ ദർശാസിനോടൊപ്പം ലഭിക്കുന്നതാണ്.

അടക്കൽ തുക— 20,00,000.

നിരത്വവ്യൂഹം—1%.

അസ്ത്ര ദർശാസ് ഫോറത്തിൽ വില 3000 + 4% മുല്യായിഷ്ടിത നികുതിയും ഇത് ഓഫീസിൽ ഒടുക്കേണ്ടതാണ്. ഡ്യൂപ്പിക്കേറ്റ് ദർശാസ് ഫോറത്തിൽ വില 1,500 + 4% മുല്യായിഷ്ടിത നികുതിയും ഒടുക്കേണ്ടതാണ്. ടെണ്ടർ ഫോറത്തിൽ വില യാതൊരു കാരണവശാലയും മടക്കിക്കാടുകുന്നതല്ല. ടെണ്ടർ ഫോറത്തിൽ വില്പന 12-1-2013, 3 മണിക്ക് അവസാനിക്കുന്നതാണ്. നിശ്ചിത ഫോറ തിലുള്ള ദർശാസുകൾ 14-1-2013, 5 മണിക്ക് മുൻപായി ഇത് ഓഫീസിൽ ലഭിക്കേണ്ടതാണ്. പ്രസ്തുത തീയതിക്കുണ്ടാക്കണമെന്നതാണ് ദർശാസുകൾ യാതൊരു കാരണവശാലയും പരിഗണിക്കുന്നതല്ല. 15-1-2013, 11 മണിക്ക് ദർശാസുകാരുടെയോ അവരുടെ അംഗീകൃത പ്രതിനിധികളുടെയോ സാമ്പില്യുതിൽവച്ച് ദർശാസുകൾ തുറക്കുന്നതായിരിക്കും. ദർശാസ് ഫോറങ്ങൾ കൈമാറ്റം ചെയ്യാൻ പാടില്ല.

ഇത് ദർശാസിനെ സംബന്ധിച്ച വിശദവിവരങ്ങൾ, വ്യവസ്ഥകൾ, ദർശാസ് ഫോറങ്ങൾ മുതലായവ കുമാൻസ്റ്റ് ജനറൽ, ഫോം ഗാർഡ് സിവിൽ ഡിഫൻസ് ഫയർ ആർട്ട് റെസ്ക്യൂ സർവീസ്, കേരള, ഫൗസിംഗ് ബോർഡ് ജംഗ്ഷൻ, പൂളിമുട്ട് പി. ഓ., തിരുവനന്തപുരം-695 001 എന്ന ഓഫീസറുടെ ഓഫീസിൽ നിന്നും എല്ലാം പ്രവൃത്തി ദിവസങ്ങളിലും വെക്കുന്നേരം 5 മണിവരെ ലഭിക്കുന്നതാണ്. ദർശാസിൽനിന്ന് വില യാതൊരു കാരണവശാലയും പോറ്റുക ഓഫീസ്, പോറ്റു റൂം, ചെക്ക്, ബാക്സ് ഡ്യാഫ്റ്റ് എന്നിവയായി സ്രീകരിക്കുന്നതല്ല.

Technical Specifications of Trussed Type 10.5 Meters Fire Ladders

1. Scope

The specification covers the design, fabrication, testing inspection before despatch and delivery, it includes the details of materials required in fabrication of Trussed Type Fire Ladders, size and mass of the ladders and performance tests to be carried out at the manufacturers works.

2. Requirement

The ladder shall be suitable for use in construction, maintenance, operations of fire fighting and rescue works, the length of the ladder can be varied as required between the fully extended position to fully retracted position.

3. Applicable Standards

Unless otherwise modified in the specification, the ladder shall comply with the requirements of IS-733 of 1983 along with latest amendments thereof, the stainless steel parts must comply with the requirements of the grade AISI-316 along with latest amendments thereof, the rope provided shall comply with IS-5175

4. General

This standard lays down the requirements regarding materials, construction, workmanship, finish and acceptance tests of aluminium double extension ladder trussed type used for fire fighting and rescue operations, the ladder must be made with a view to combine lightness with strength and durability, all metal parts must be either corrosion resistant or treated to resist corrosion. When fully extended the ladder must be 10.5 meters/35 feet long overall and so constructed that it is reasonably rigid, strong and free from away when pitched against the wall with the base of the ladder at 6-6 inches/2 meters from it and two men are ascending the ladder at speed or one men is carrying another while descending the ladder.

5. Materials

The choice of the materials to be used in the construction of the ladder to be made with a view to combine lightness with strength and durability, aluminium alloy strings and rods used in the ladder must be light in weight, rust proof, fire proof, rot proof, minimum strength of the hollow rounds and tubes must be not less than 20 kgs/and the temper alloy of the material to be Hv grade the hollow rounds and tubes must be non defective or else the same will be rejected the specific alloy and temper combinations must be used and no other combination will be allowed.

All metal parts must be either treated to resist corrosion or must be corrosion resistant such as stainless steel components must be fitted and grade of the stainless steel be not less than 316 quality.

The polyamide multifilament three strand hawser and rope to be manufactured from hawser laid yarn twisted together with Z twist, the number of rope yarn and strands must be not more than three, number of varns must be equal, the rope and the strands must be shall be continuous with splice the finished rope shall be flexible, well laid and free from defects in yarn strands and finish, the breaking load of the rope to be 2210 Kgs. This rope to be fitted for extending and lowering the ladder.

The locking pawls must be made from aluminium alloy chilled casting to make the materials of sold strength for rigid use, special steel spring must be fitted to manage the device function controls, covers made from aluminium alloy metal 'C' shaped materials of 3 mm thickness of H 1 sheets and length of the boxes must not exceed 12 inches, Lock Covers made from any other material (Stainless Steel/ Mild Steel) will not be accepted. The length of the long pawl must not exceed 208 mm and length of the short pawl must not exceed 85 mm under any circumstances.

The heals of the stiles or strings of the lower section must be fitted with feet to avoid slipping the stiles of the ladders must be fitted with 16 units of 5 Nos. of sliding fitments to function smoothly and the melting point of these fitments to be less than 200 degrees at any point.

Bushes used in the friction parts must be made from extruded gun metal rods only, outer part of the bushes must be made from extruded corrosion resistant bar rod to guide the polyamide line aluminium round head rivets must be used for the construction of the ladder units, no flat head rivets must be used for the constructions of the ladder head wheels must be fitted at the top of the ladder to avoid friction or damage while extending or lowering the ladder, the method of fixing the head wheels must be with single rod to hold the same while in rescue operations and smooth movement single bold fitting will not be accepted and any other materials used will not be accepted.

6. Construction

The truss construction using air-craft industry technique of riveting combines with the high tensile aluminium extrusions to give strength rigidity and light in weight aspects the rounds are square sections to prevent turning and the treated surface is ribbed to give excellent non-slip properties the guides from an integral part of the stiles.

Dual action long and short pawls are fitted to ensure negative actions the top section is extended by a line with rot proof and non-hardening features for ease of handling, wheel assembly fitted to the head to facilitate easy running against uneven wall surfaces, footing spigots must be fitted for slip proof on smooth surfaces Rungs to be fitted by one direct pin punch clip rivet system to strengthen the structure and not any other method, sides of the ladder to be fully packed from outside to avoid weakening and to improve the strength and stability of the product structure.

7. Description

The ladder must consist of two sections, one main and one extending section the width of the narrowest section being more than 16 inches, the strings must be built-up construction with trussing, the trussing must be on the upper sides of the ladder when it is in operational use.

All the hollow section must be reinforced with bulbs made of aluminium to be fitted from outside for further strengthen the structure for rigid use of the ladder, the design of the ladder be such that it ensure easy sliding of the extending section without excessive clearance in the guidelines, no lubricants must be used for extension or sliding of the ladder sections, accurate safety aluminium bar fitments to be provided in the ladder the extending section must be guided through out the full range of extension in such a manner that it cannot separate no plastic or other fitments to be fitted for preventing over extension of the ladder.

The ladder must be capable of being fully extended by one men by means for effortless lifting and lowering the ladders so as to leave the working face of the ladder unobstructed the total height of both the sections (completes ladder) must not exceed 172 mm under any circumstances.

The rope must be of 12 mm dia 36 mm circumference to provide a convenient grip and must be reasonably flexible when wet the end of the rope must be attached to the bottom of the main section so as to leave the minimum amount of slack when the ladder is fully housed.

Interlocking must be fitted to avoid accidents while in use automatic locking device in a set of two must be fitted to hold the ladder in any position of extension at which the rounds on the main ends, the two sections must co-inside each other so preferably arranged that they engage automatically release being effected by still further extending the sections before lowering the pawls being such that they are set for engagement with one another until they are rested and trip to clear immediately.

The ladder sections must fit as clear as possible to one another to keep to a minimum the extent of step in or step out the distance between two rungs in height must not exceed 1 "(25.4 mm) when passing from one section to another rounded must be of square cross section and must be provided with nonslip treads raised above the surface of the rounds to be placed at 10 inches 250 mm apart and not more as if the same is fitted at more distance it will cause accidents as per the usual practice of the fireman to work on the ladder is at 10 inches in fire and rescue operations the number of rounds in each sections must be not less than 22 and totally be not less than 44 in the complete ladder the overlapping must be on not less than 6 rounds of both the sections.

Special aluminium rectangular bar locks to be fitted to the integral parts of the ladder for safety and security to avoid accidents which forms a safety device there shall be no difference in the level of the steps rungs of the upper and lower sections in overlapping portions when open or retracted.

Weight of the ladder must be not be less than 52 Kgs and must not exceed 54 Kgs. The ladder exceeding 54 Kgs weight and below 52 Kgs weight will not be accepted.

8. Sizes

Extended length	10.5 meters 53 feet	Approx.
Closed length	6.23 meters 20 feet	Approx.
Overall Width	540 mm 21 inches	Approx.
Weight Range	5254 Kilograms	Exact
Step Spacing	10 inches 250 mm	Exact
Number of Steps in each Section	22 Numbers	Exact
Number of steps in full ladder	44 Numbers	Exact
Number of overlapping rounds	06 Numbers	Exact
Overall Height of ladder	172 mm	Maximum
Height distance between rungs	25.4 mm	Maximum

9. Workmanship and Finish

It is essential that standard of workmanship is such that spares can be provided for all replaceable parts and that they will fit without any difficulty. Finish must be good and any surface of the ladder must not be buffed as it will reflect light and thus cause difficulty in fire and rescue operations any strings or rounds having cracks or air bubbles are not to be used for construction of the ladder flat head rivet construction will not be in accepted in any case and cracked or bend section to be used for manufacturing of the ladder.

10. Acceptance Tests

The acceptance tests to which the ladder will be subjected to are given below. These tests will be carried out at the manufacturer's work all the equipments required must be arranged by the supplier.

11. Deflection Test

The fully extended ladder shall be placed across trestles positioned or 40 cms from each end, on a 30cms wide board placed across the trestles strings at the center of the span load of 38 Kilograms shall be applied and be allowed to remain there for not less than a minute and then be removed. A load of 76 Kilograms is then to be gradually applied and the deflection due to this load shall not exceed 4 inches from the original position the load shall then be gradually increased to 114 Kilograms and the additional deflection shall not exceed 50% of that obtained there shall be no sign of distress in any part of the ladder which when the load is removed and must return to a position not lower than that taken after removal of 38 Kilograms load i.e. show no sign of permanent set.

12. Side Test

After completion of the deflection test the ladder still resting on the two trestles it is to be turned trough 90 degrees on to one side. In this position the deflection of the ladder under its own weight is to be measured from the center of the round at the point of maximum deflection to a line drawn between the center of the top and bottom rounds of the ladder. The deflection should not exceed 2 inches, the ladder is then to be turned over and tested on the other side.

13. Round Test

The fully extended ladder placed across the trestles horizontally with support two men weighing 150 Kilograms shall walk over the rounds. No sign of failure must be apparent on the rounds or its junction with the strings during this test.

14. Round Test

The fully extended ladder shall be placed vertically and two men weighing 150 Kilograms shall jump on round from the round above. No sign of failure must be apparent on the rounds or its junction with the strings during this test.

15. Round Test

With the feet of the ladder at a distance of 6 Feet from the wall the ladder shall be fully extended and its head rested against the wall. A load of 320 Kilograms shall then be gradually applied to the middle of one round in each section by means of metal hook having a bearing surface of 5 cms wide and suitably lined to prevent brushing of the round, no sign of failure must be apparent either on the round or at its junction with the strings during this test.

16. Swing Test

When pitched against a wall with the base of the ladder at 6 feet one man weighing 75 Kilograms to ascend the ladder and descend the same, the ladder should not bend or weaken after the test there must be no sign of failure at the round or its junction with the string.

17. Extension Test

The ladder must be capable of being fully extended by one man by a line on the main section to the required length. The ladder shall also be not over extended.

18. Drawings

The general schematic drawing and catalogue must be enclosed with the tender by the supplier fabricator, which the offer will not be considered.

19. Performance Certificate

The manufacturer submitting the offer will have to provide after sales certificate with performance certificates obtained without which the offer will not be considered.

20. Guarantee

The manufacturer will have to furnish a maintenance guarantee undertaking for service repairs, replacement maintenance etc. in and against any defects in the materials used for 12 calendar months commencing from the date of acceptance of the ladders and the manufacturer will replace or repair any part or parts free of cost.

21. Markings

Each extension ladder must be clearly and permanently marked with the following information.

Manufactuer's name or trademark if any.

The size of the ladder.

The Serial No. of the ladder and year of manufacture.

22. Test Certificate

Aluminium materials, Fitments Rope and S.S. materials test reports to be provided at the time of inspection of ladders.

23. Gantry

These are the gallows for mounting the product on the fire tender which is to be provided with the ladder without which the offer will stand rejected.

24. Deviations

No Deviations will be accepted as this is an important life saving Rescue Equipment.

CONDITIONS

1. Whether Samples are : Pamphlets, photograph etc., should be forwarded along with tender.
2. Period within which : Within 2 weeks from the receipt of supply order.
3. Rates should be quoted : For Thiruvananthapuram for the delivery including transporting charge of the items to Kerala Fire & Rescue Services Headquarters.
4. Payment : 90% Payment against delivery at Thiruvananthapuram in good condition.
5. Other Special condition : A guarantee of 12 months from the delivery of item.

Fire & Rescue Services Head quarters

Housing Board Junction,
Thiruvananthapuram-1.

(Sd.)

Commandant General.